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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,946	09/30/2003	Christian Everett		3791

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EXAMINER

OH, TAYLOR V

ART UNIT PAPER NUMBER

1625

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/673,946

Applicant(s)

EVERETT, CHRISTIAN

Examiner

Taylor Victor Oh

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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The Status of Claims

Claims 1-3 are pending.

Claims 1-3 have been rejected.

**DETAILED ACTION**

**Priority**

1. It is noted that the application is a CIP of 09/910,248 (07/20/2001) ABN, which claims a benefit of 60/228,828 (8/28/2000).

**Drawings**

2. None.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-3, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Therefore, an appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (U.S. 2,377,025) in view of Wulff (U.S. 1,938,991) and Aldrich (Catalog handbook of Aldrich. Pages 1295 and 354; 1998 ).

Miller teaches a process of converting acetaldehyde to acetylene in the presence of a catalyst containing aluminum, magnesium, which may be used in the form of oxides (see col. , lines 44-49):

Acetaldehyde  $\xrightarrow{\text{catalyst}}$  acetylene + water (see col. 2 ,line 47). The reaction is carried out at a temperature between 250 and 350<sup>0</sup> C; the reaction products are

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condensed and removed along with water ,whereas the unused materials may be recycled (see col. 2 , lines 29-32).

However, the instant invention differs from the prior art in that the substituted ethynes have produced; the resulting gas stream of ethyne and water and unreacted materials is cooled at temperature of  $-50^{\circ}\text{C}$  .

Wulff teaches the method of separating acetylene from gaseous mixture by applying a refrigerating system at a temperature of  $-77^{\circ}\text{C}$ .

Regarding the difference in the cooling temperature, Wulff does teach that the cooling process takes place at a temperature of  $-77^{\circ}\text{C}$ . Furthermore, the limitation of a process with respect to ranges of pH, time and temperature does not impart patentability to a process when such values are those which would be determined by one of ordinary skill in the art in achieving optimum operation of the process. Temperature is well understood by those of ordinary skill in the art to be a result-effective variable, especially when attempting to control selectivity in a chemical process. Therefore, it would have been obvious to the skilled artisan in the art to be motivated to achieve the optimum temperature operation of the cooling process by choosing the claimed temperature by routine experimentation, thereby controlling selectivity in the chemical process because the skilled artisan in the art would expect such a modification to be successful and to be economic.

With respect to producing the substituted ethynes, the prior art is silent.

However,

Miller does expressly teaches the generic process of converting acetaldehyde to acetylene in the presence of the catalyst ; the final substituted ethyne products and the substituted starting materials are well-know in the art ; for example, phenyl acetaldehyde, chloroacetaldehyde, and etc are shown in Aldrich (Catalog handbook of Aldrich. Pages 1295 and 354; 1998 ). Furthermore, the substituents in the substituted acetaldehydes have no role to play the reaction process; they are not involved in the reaction mechanism. Therefore, there is no patentable weight over the prior art. Therefore, if the skilled artisan had desired to produce either phenyl acetylene or chloro acetylene, it would have been obvious to the skilled artisan in the art to be motivated to use either Aldrich's phenyl acetaldehyde or chloroacetaldehyde as a starting material in the Miller process.

Miller does expressly teaches the generic process of converting acetaldehyde to acetylene in the presence of the catalyst during the reaction in which the reaction products are condensed and removed along with water ; the final substituted ethyne products and the substituted starting materials are well-know in the art ; for example, phenyl acetaldehyde, chloroacetaldehyde, and etc are shown in Aldrich (Catalog handbook of Aldrich. Pages 1295 and 354; 1998 ). Furthermore, Wulff has indicated that the cooling process takes place at a temperature of  $-77^{\circ}\text{C}$  during the process of separating acetylene from the

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gaseous mixture. Both Miller and Wulff are related to each other with respect to the separation of ethyne product; Wulff offers a guidance as to what temperature the cooling process may proceed in the process of separating ethyne product. Therefore, if the skilled artisan had desired to produce either phenyl acetylene or chloro acetylene, it would have been obvious to the skilled artisan in the art to be motivated to incorporate either Aldrich's phenyl acetaldehyde or chloroacetaldehyde as a starting material in the Miller process along with the teaching of Wulff's cooling temperature parameter. This is because the skilled artisan in the art would expect the incorporation of Aldrich's starting materials and Wulff's cooling temperature parameter into the Miller process to be successful and to be economic as shown in the Mill reference.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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